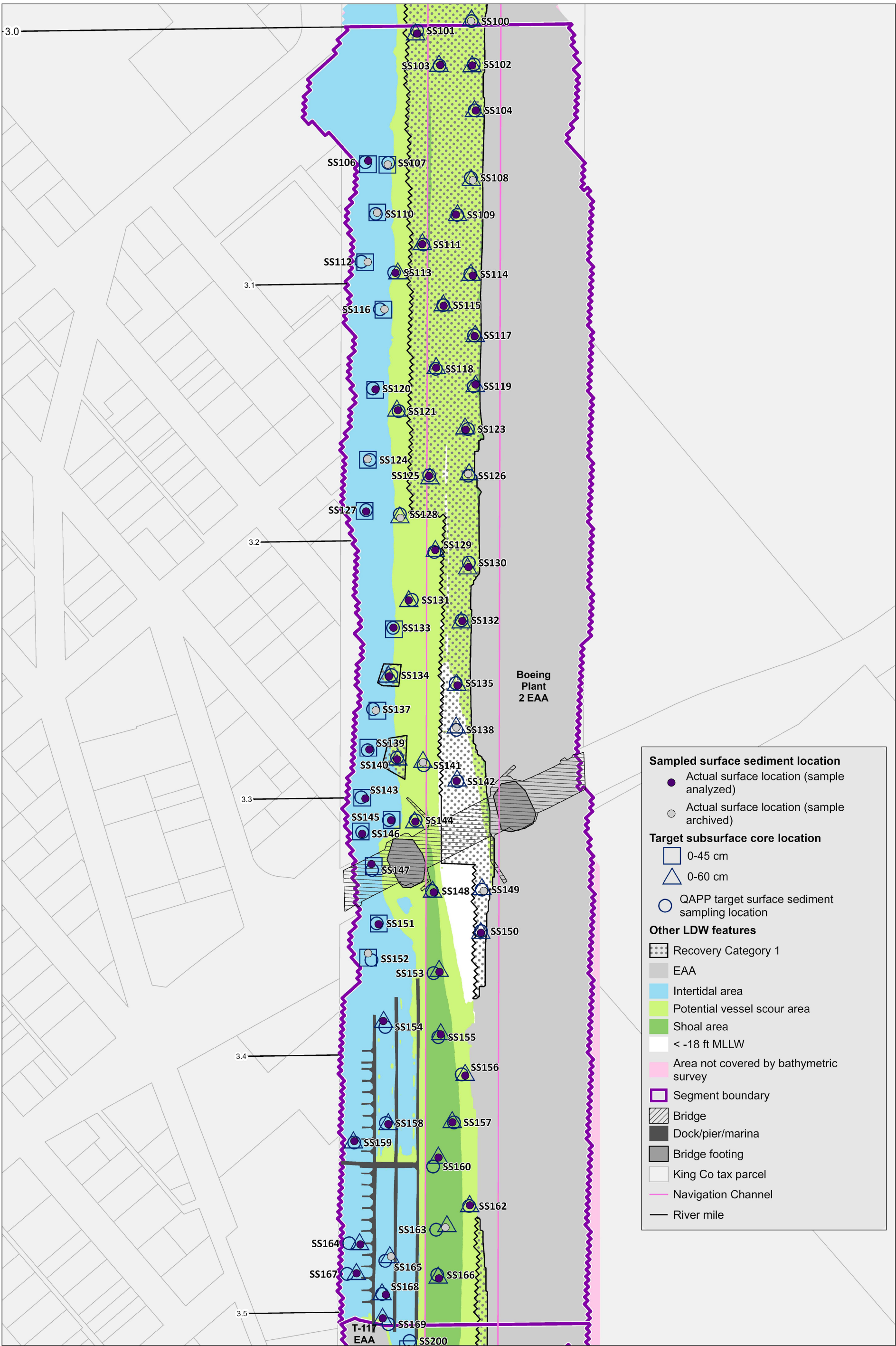


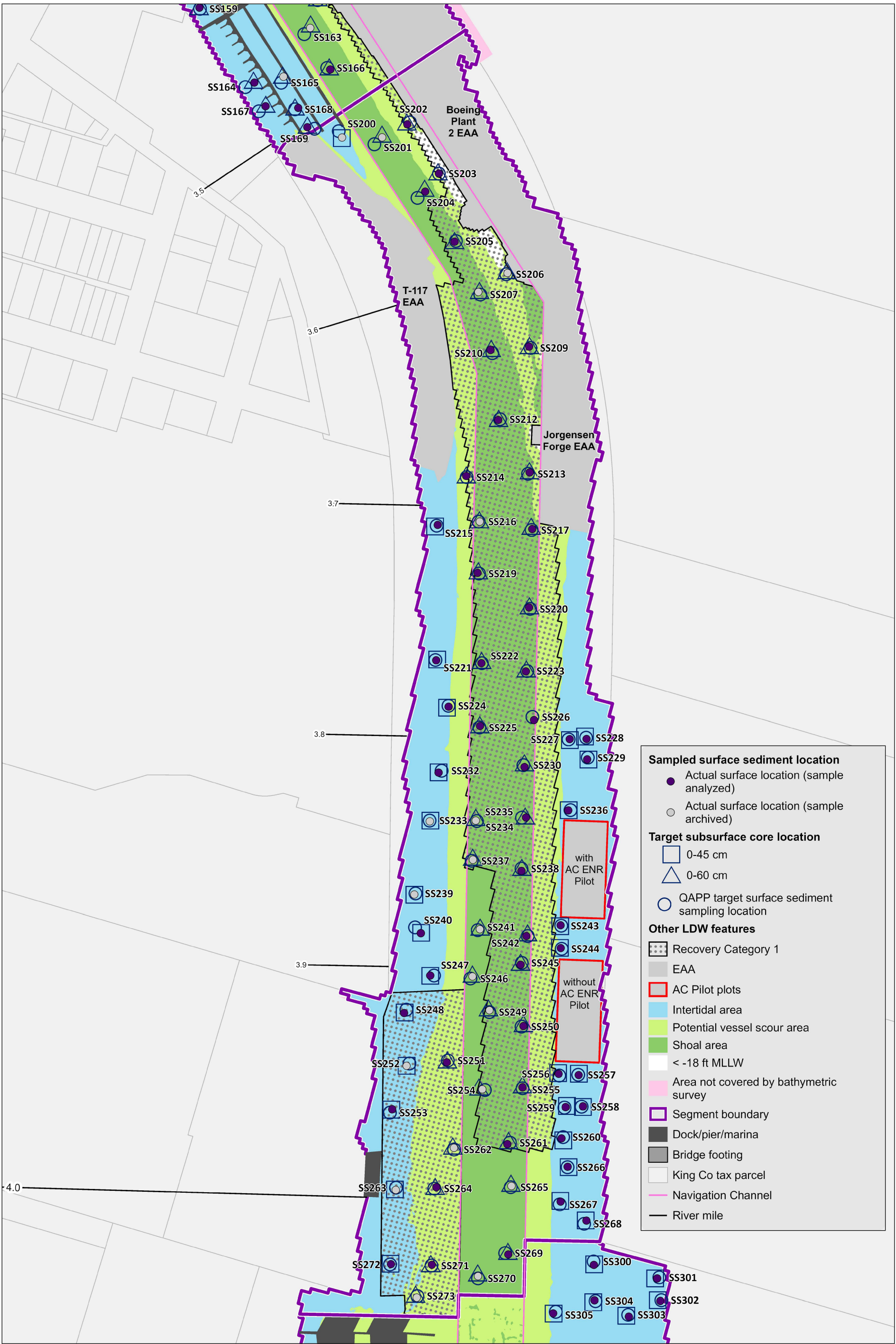
Prepared by crigh, 1/27/21, W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Map A-1 A-2 7257 Targets vs actuals.aprx



**Map A-1a. Target vs. actuals for surface sediment samples (0-10 cm), Segment 1 (RM 3.0 to RM 3.5)**

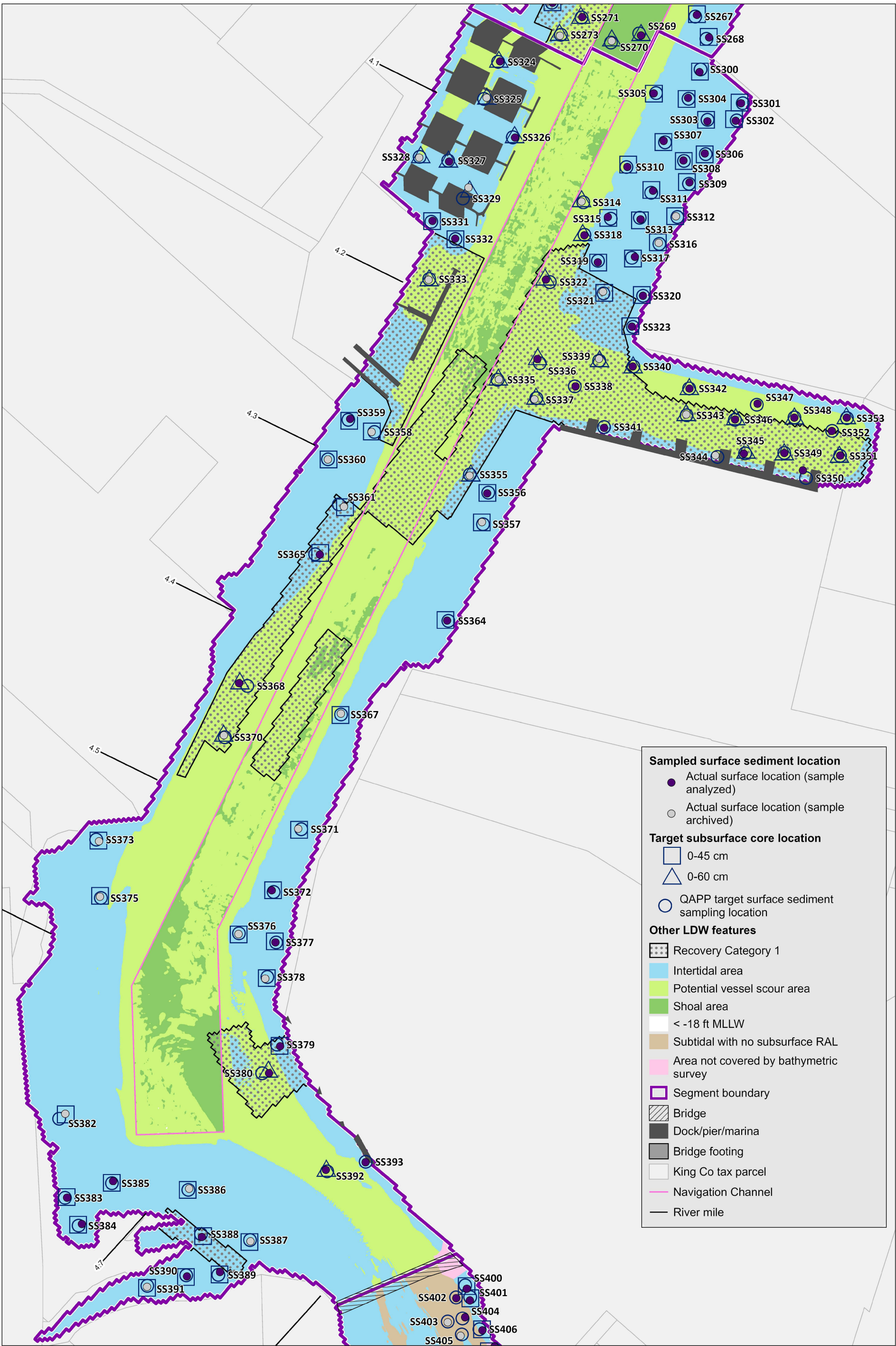


Prepared by crigh, 1/27/21, W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Map A-1 A-2 7257 Targets vs actuals.aprx



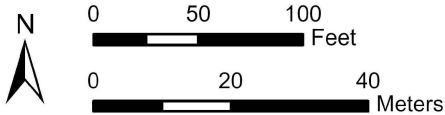
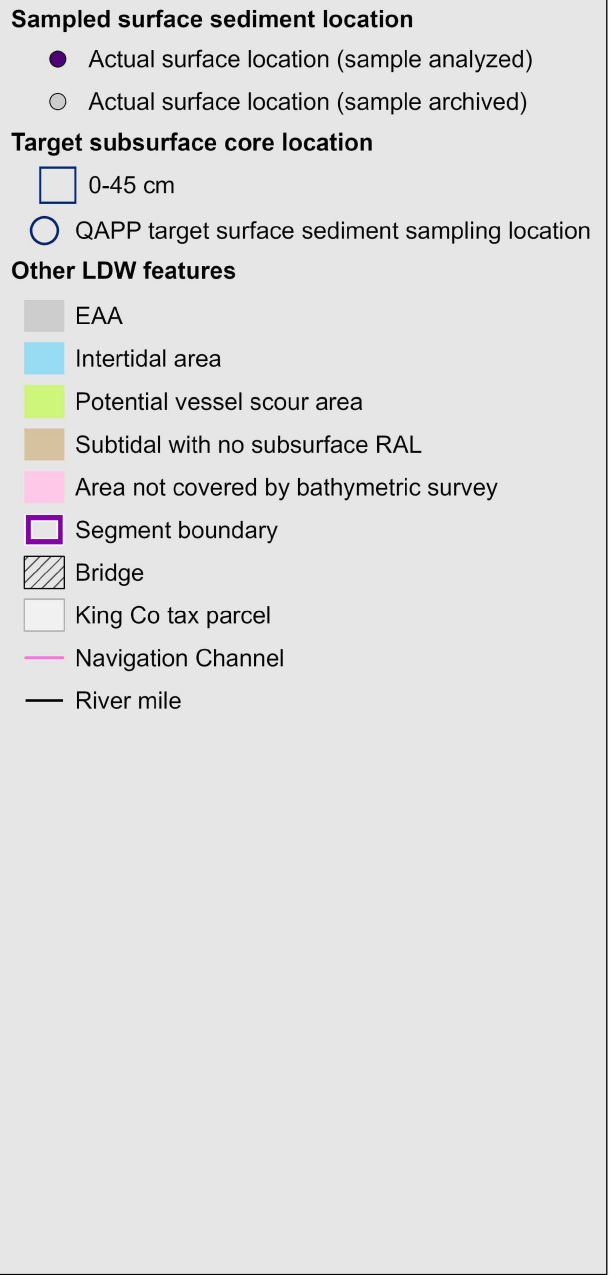
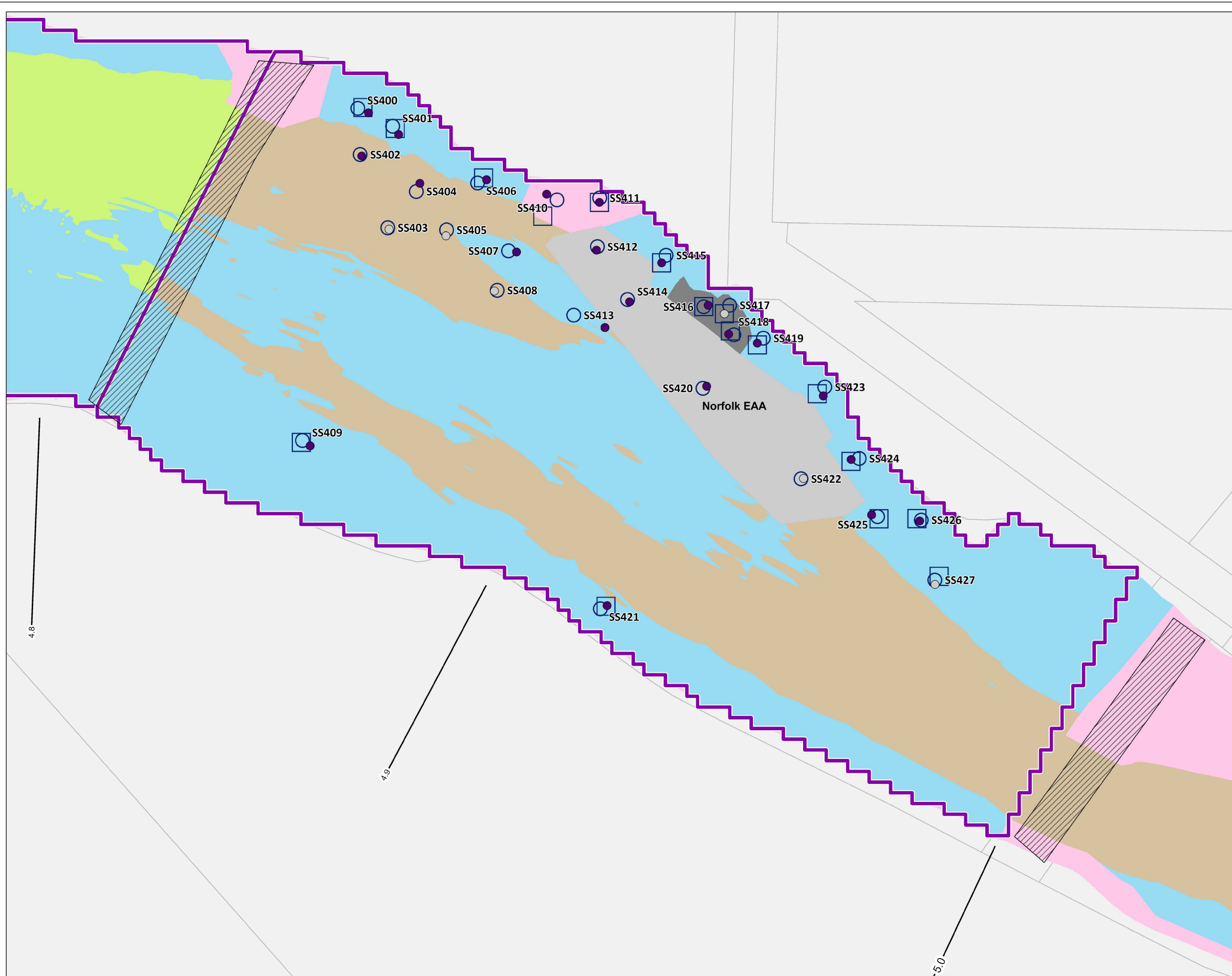


Prepared by crg, 1/27/21, W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Map A-1 A-2 7257 Targets vs actuals.aprx



**Map A-1c. Target vs. actuals for surface sediment samples (0-10 cm), Segment 3 (RM 4.05 to RM 4.81)**



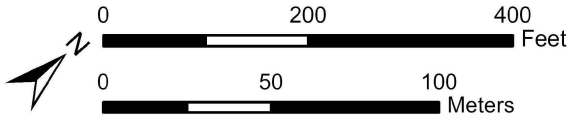
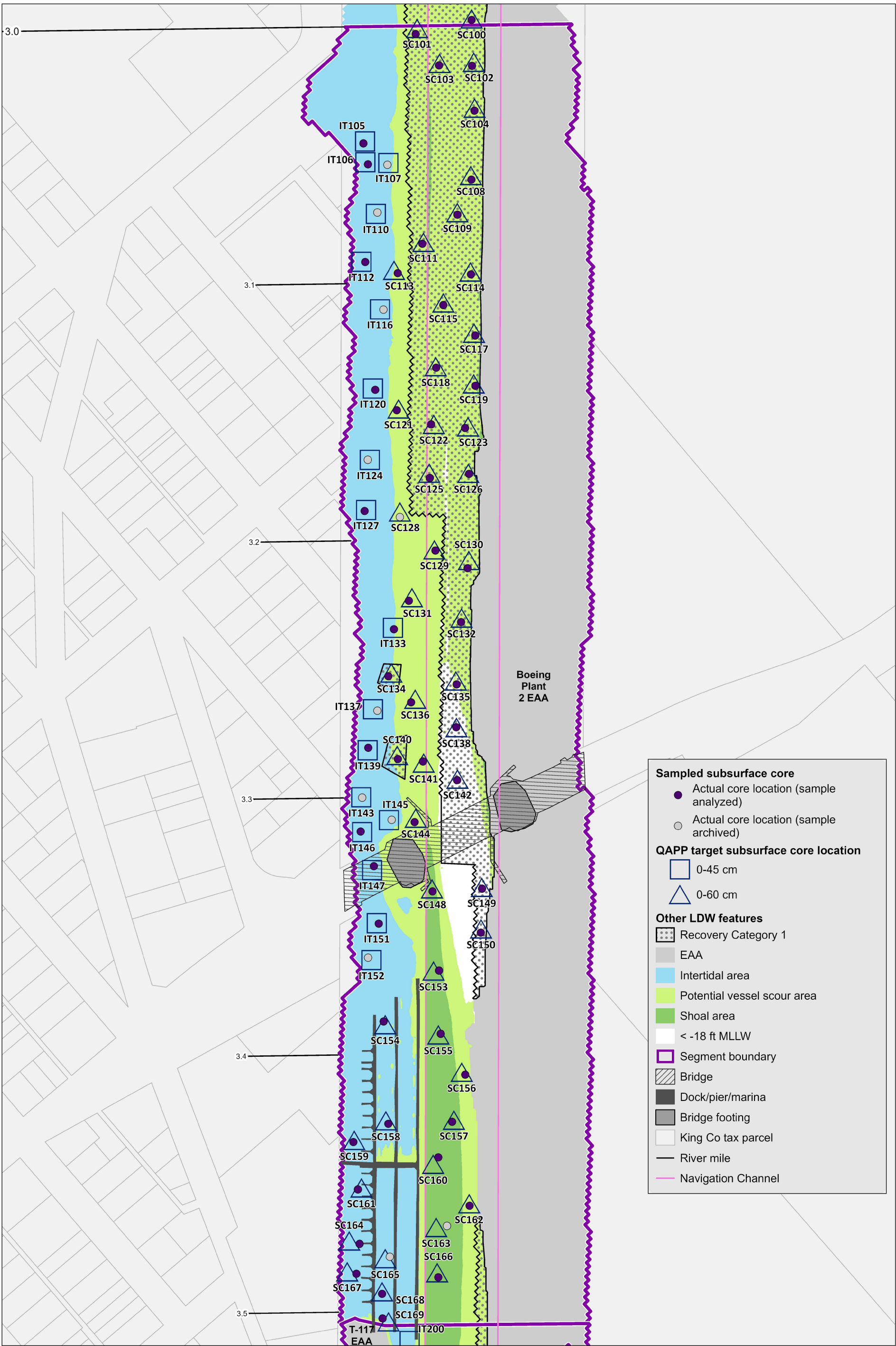


**Map A-1d. Target vs. actuals for surface sediment samples (0-10 cm), Segment 4 (RM 4.81 to RM 5.0)**

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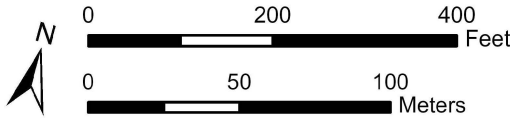
Prepared by crg, 1/27/21, W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Map A-1 A-2 7257 Targets vs actuals.aprx



**Map A-2a. Target vs. actual subsurface core locations, Segment 1 (RM 3.0 to RM 3.5)**



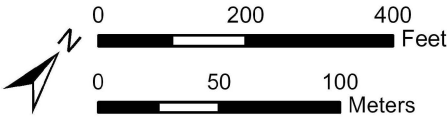
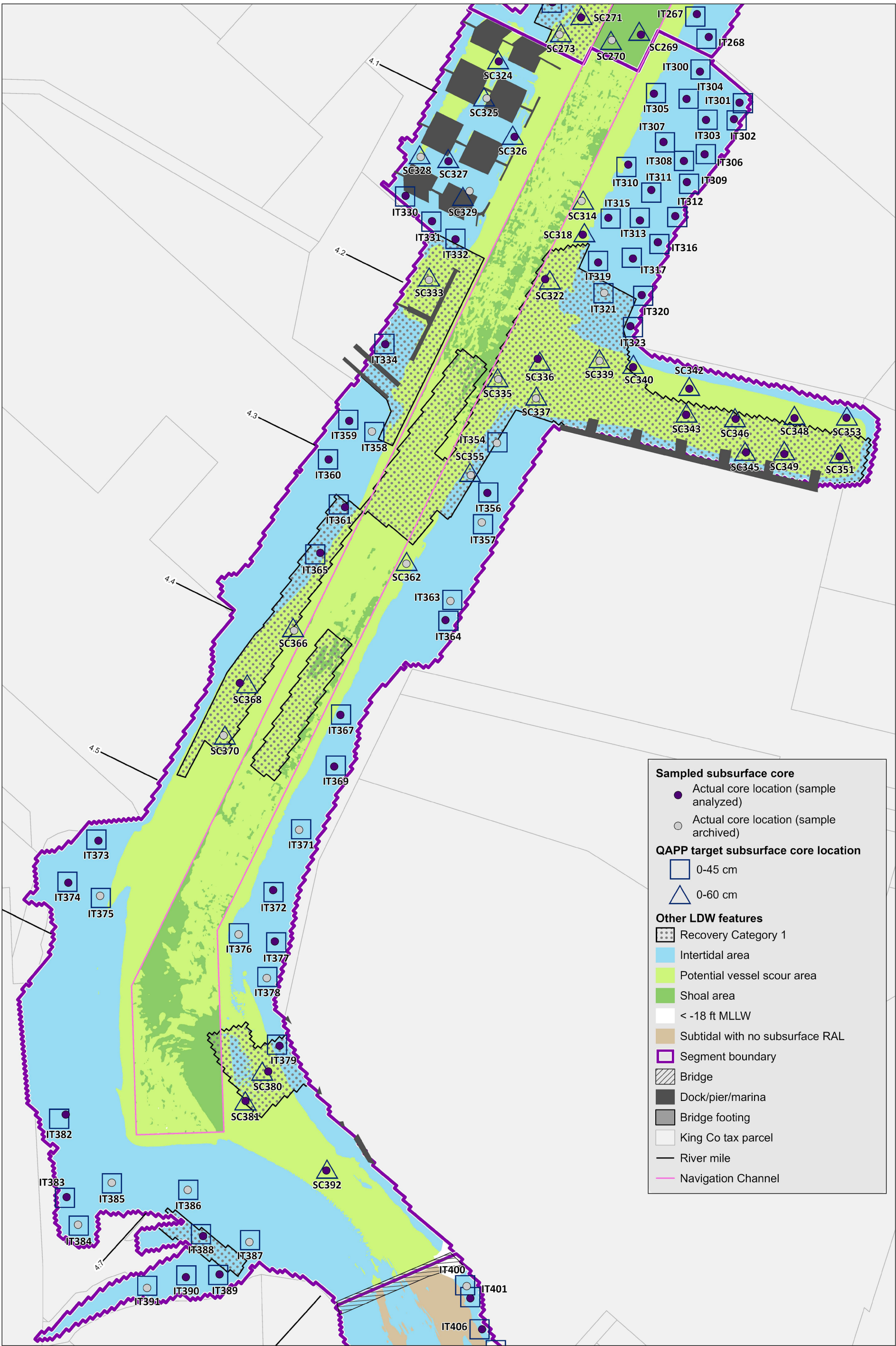
Prepared by crg, 1/27/21, W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Map A-2 7257 Targets vs actuals.aprx



Map A-2b. Target vs. actual subsurface core locations, Segment 2 (RM 3.5 to RM 4.05)

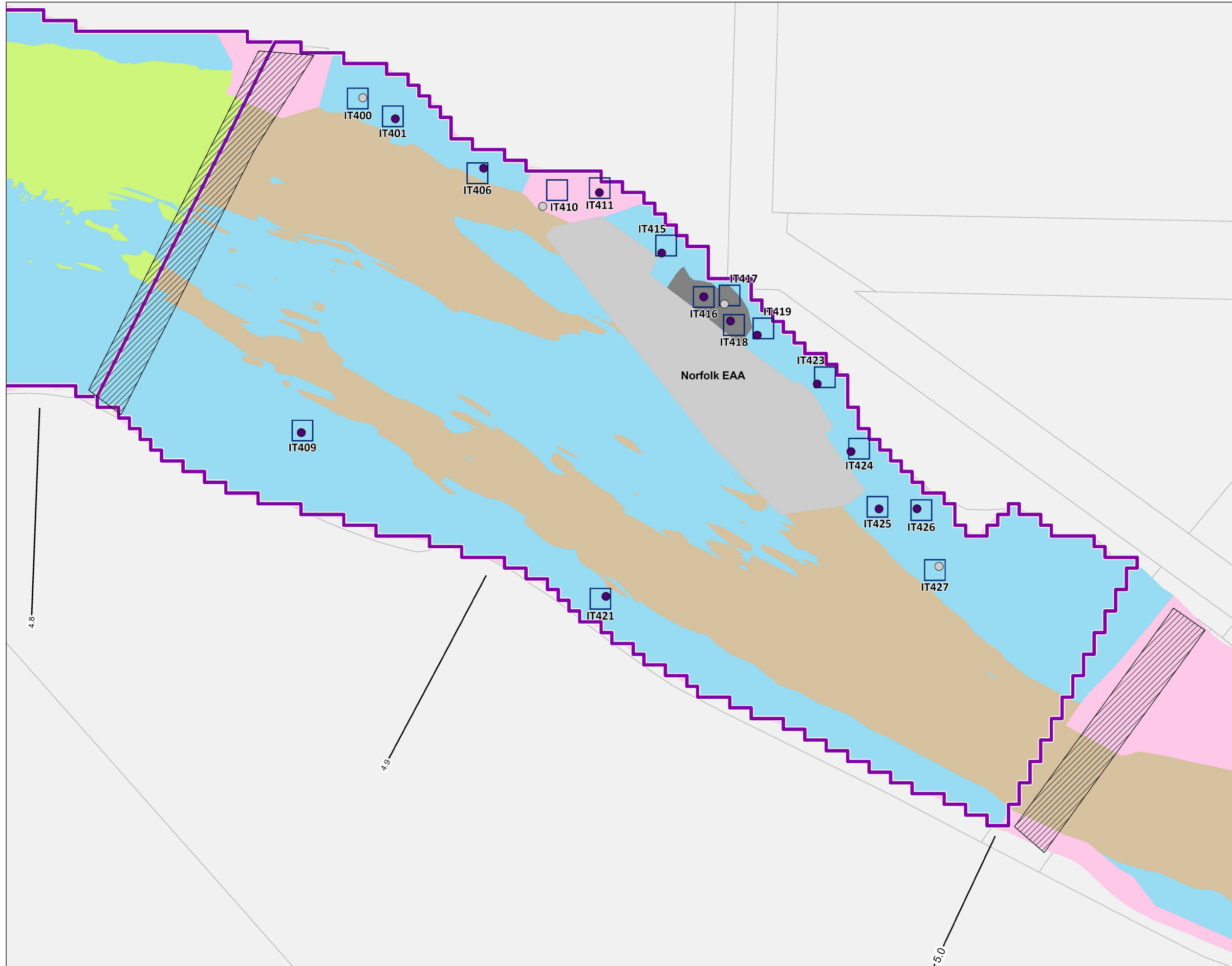


Prepared by crg, 1/27/21, W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Map A-1 A-2 7257 Targets vs actuals.aprx

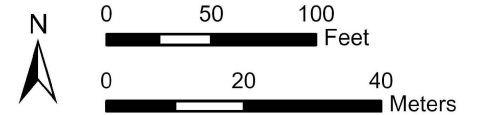


**Map A-2c. Target vs. actual subsurface core locations, Segment 3 (RM 4.05 to RM 4.81)**





- Sampled subsurface core**
- Actual core location (sample analyzed)
  - Actual core location (sample archived)
- QAPP target subsurface core location**
- 0-45 cm
- Other LDW features**
- EAA
  - Boeing South Storm Drain
  - Intertidal area
  - Potential vessel scour area
  - Subtidal with no subsurface RAL
  - Area not covered by bathymetric survey
  - Segment boundary
  - Bridge
  - King Co tax parcel
  - River mile



**Map A-2d. Target vs. actual subsurface core locations, Segment 4 (RM 4.81 to RM 5.0)**

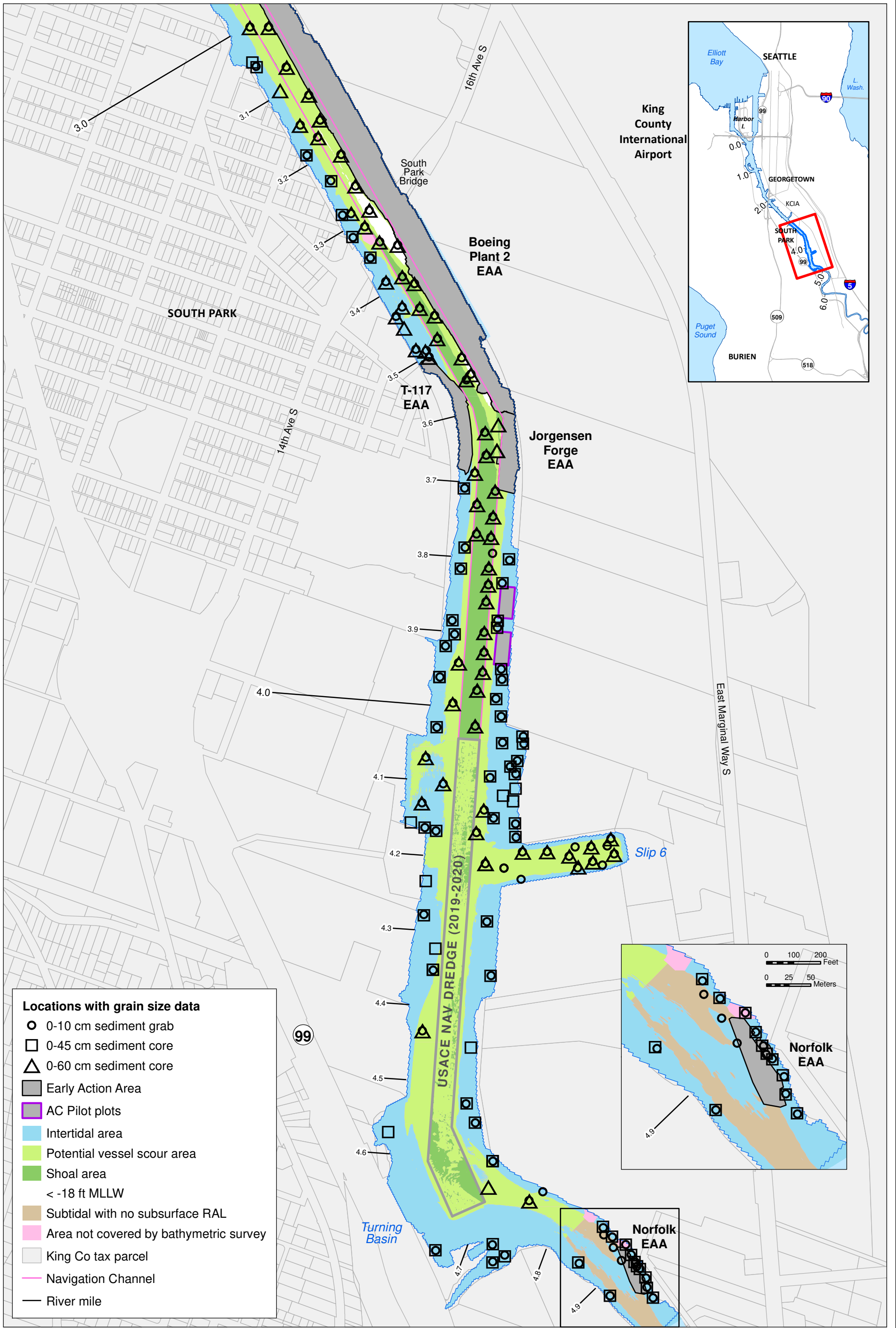
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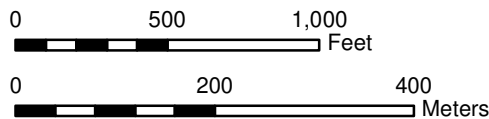
Prepared by craigh\_12721; W:\Projects\Duwamish AOC\GIS\Maps and Analyses\Phase I\Data Evaluation Report\Map C-1 7224 Phase I PDI grain size locations.mxd



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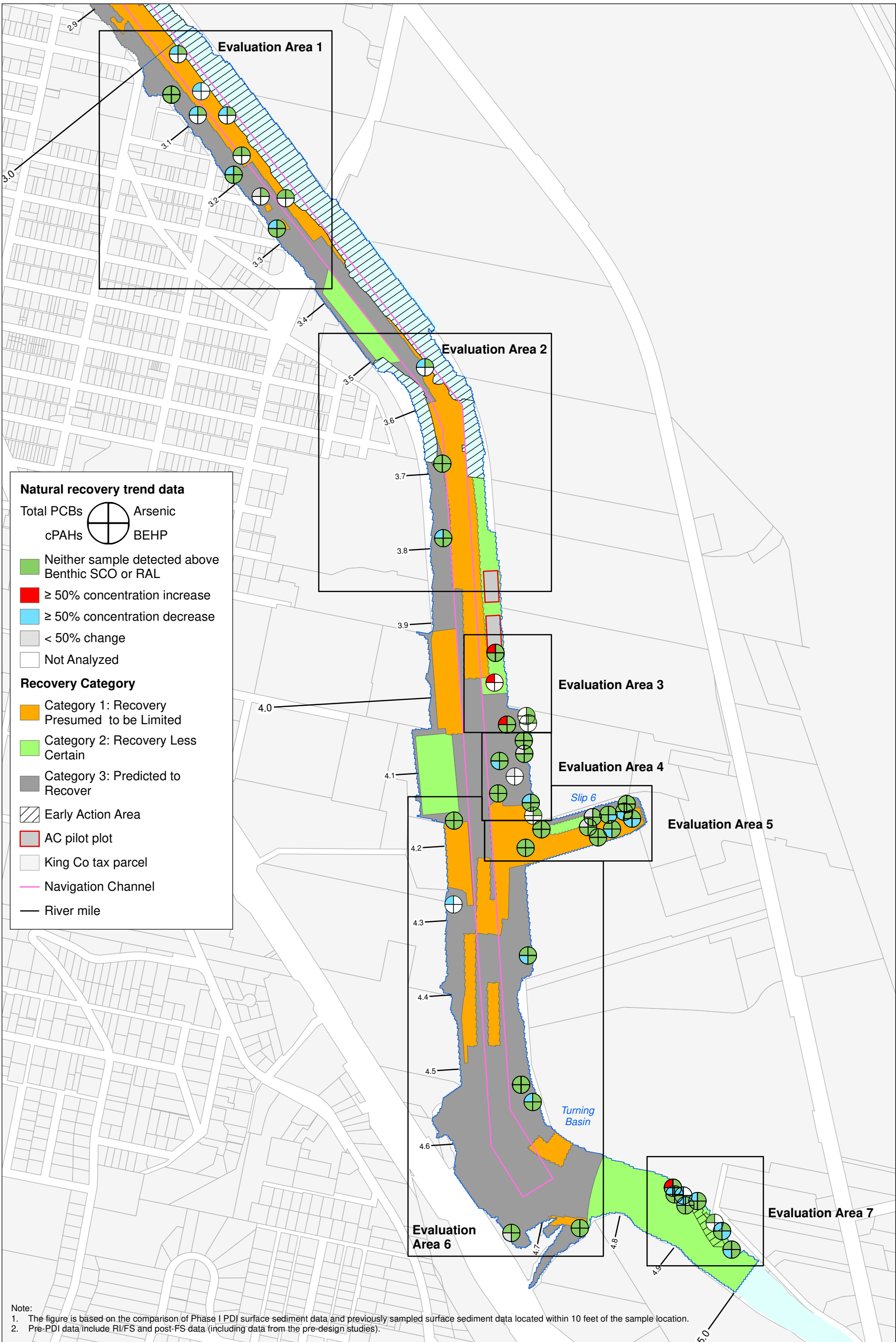
Map C-1. Locations with grain size data in the Phase I PDI

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0 500 1,000 Feet  
0 100 200 Meters

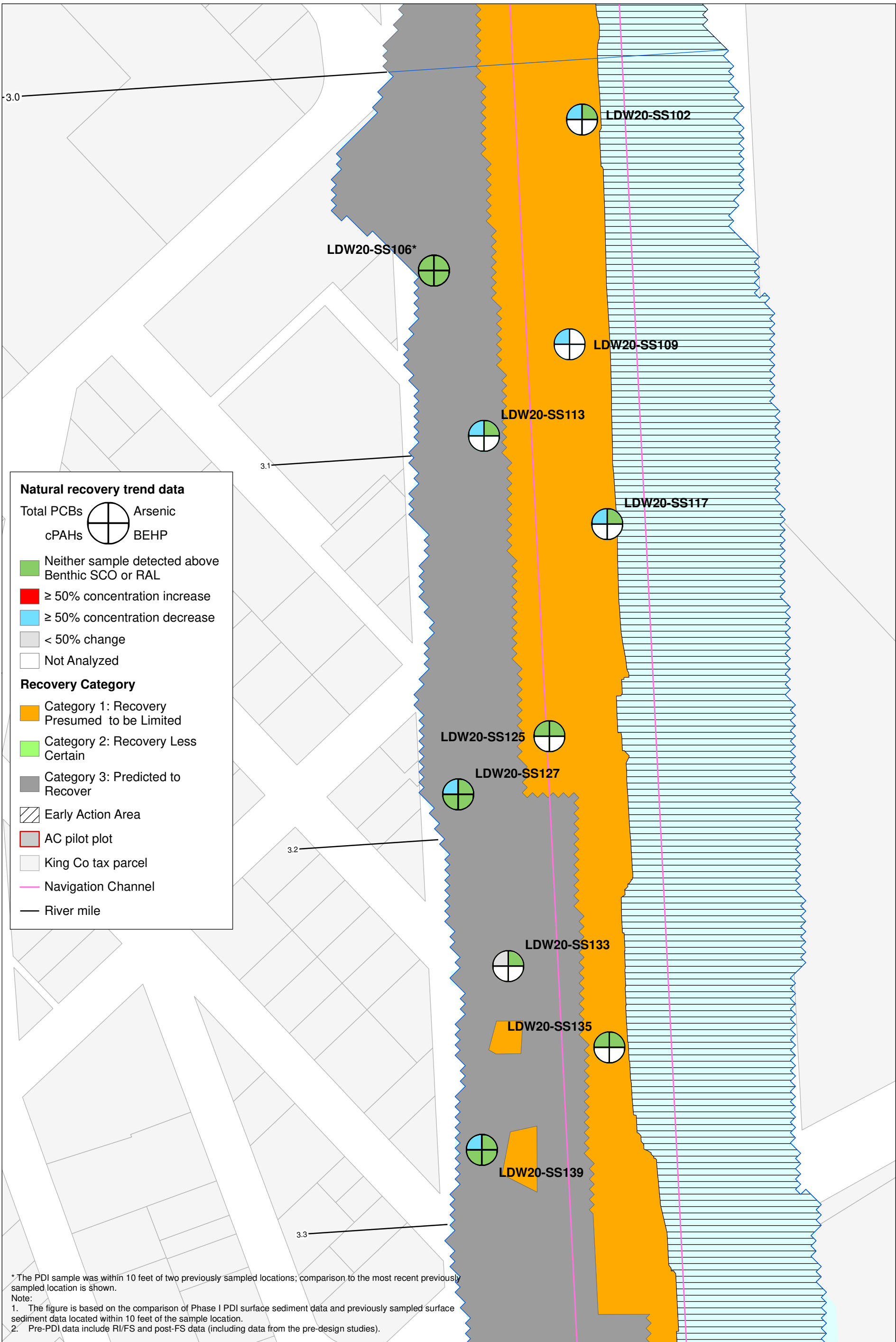
Map I-1. Comparison between Phase I PDI data and pre-PDI data at re-occupied locations

PRE-DESIGN INVESTIGATION PHASE I DATA  
EVALUATION REPORT FOR THE LDW UPPER REACH

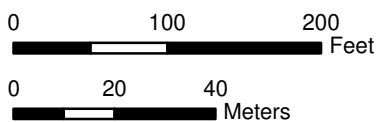
DRAFT



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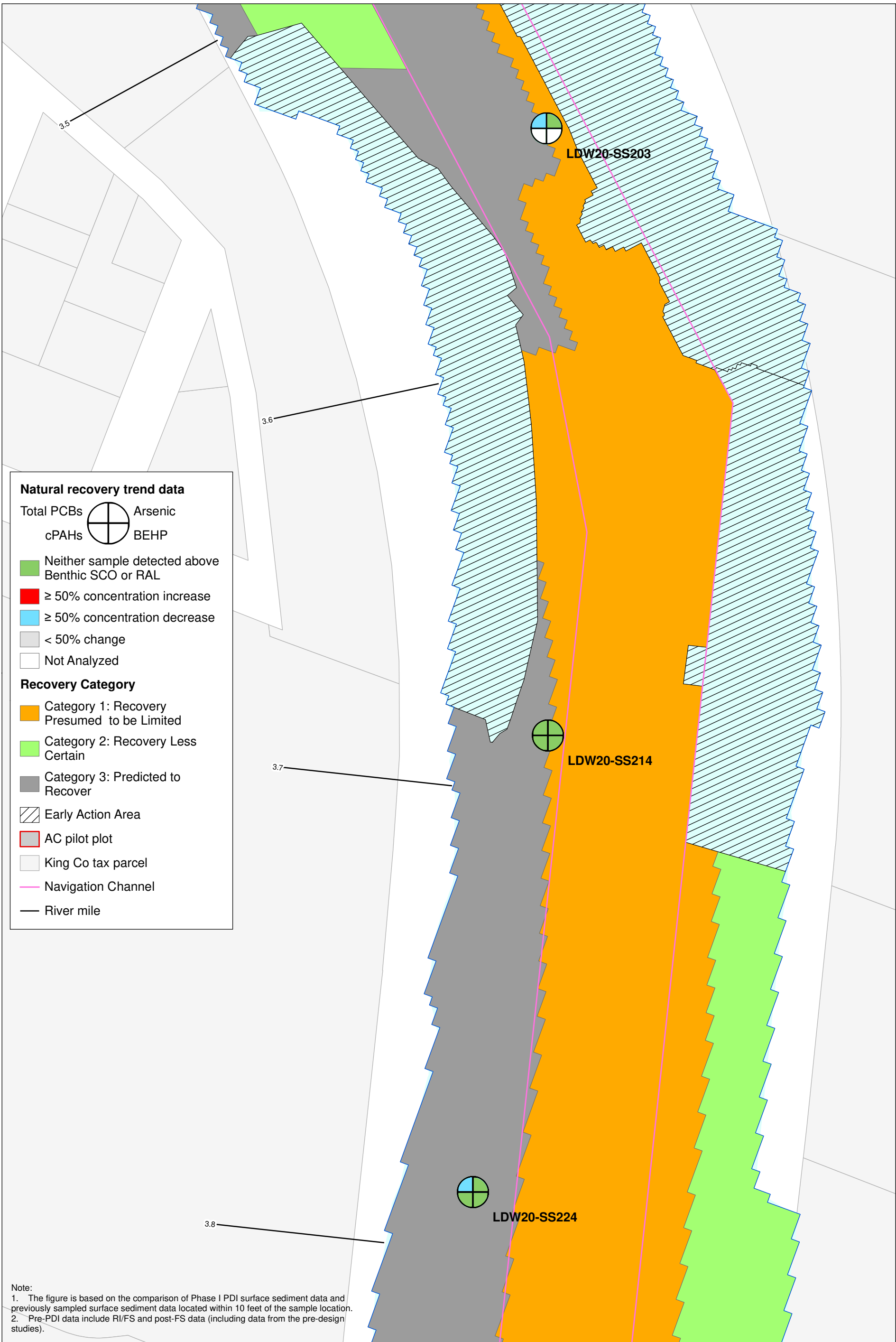
**Map I-2. Comparison between Phase I PDI data and pre-PDI data at re-occupied locations - Evaluation Area 1**

PRE-DESIGN INVESTIGATION PHASE I DATA  
EVALUATION REPORT FOR THE LDW UPPER REACH

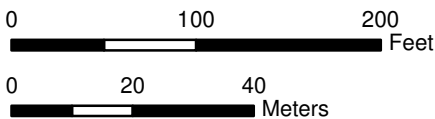
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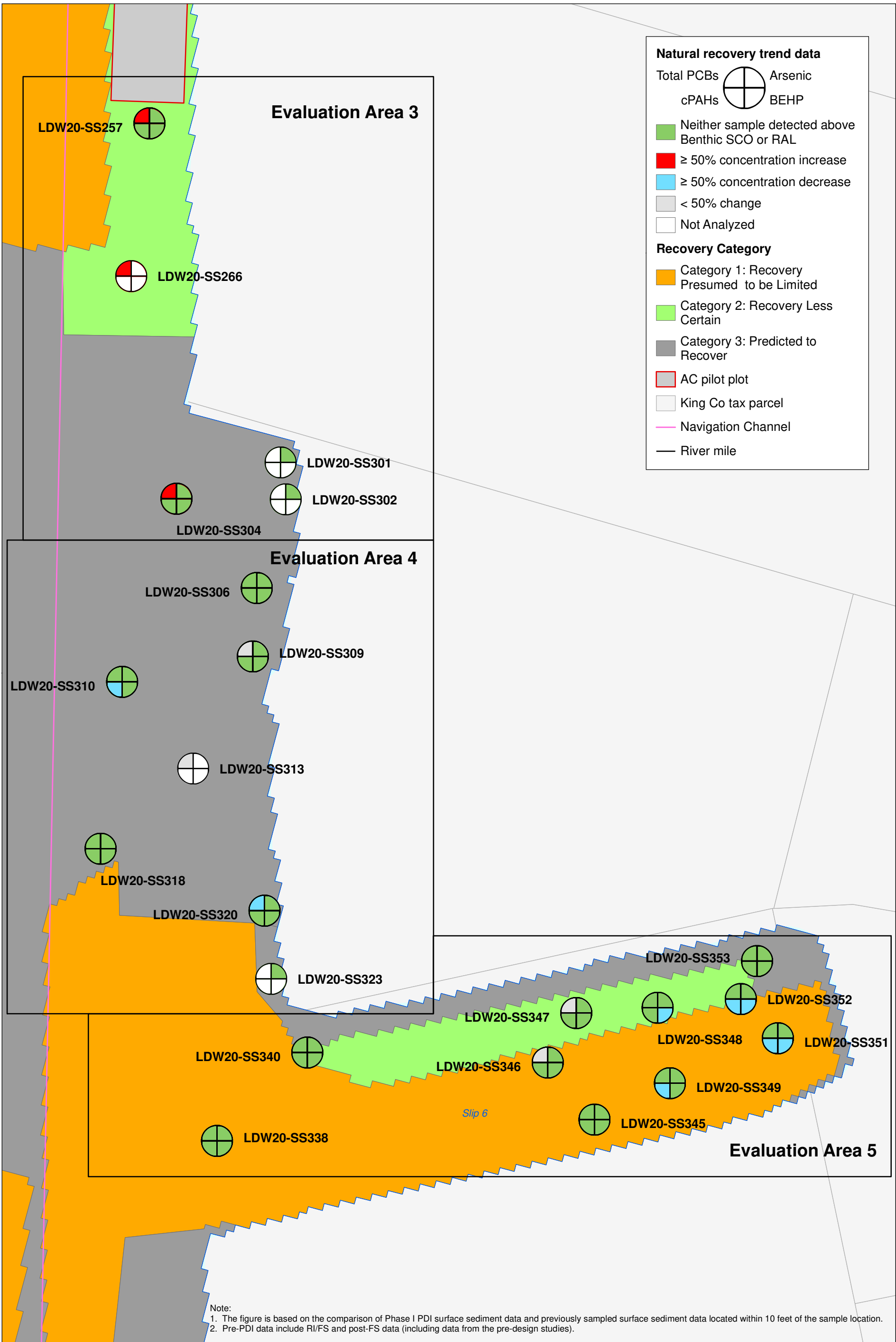
**Map I-3. Comparison between Phase I PDI data and pre-PDI data at re-occupied locations - Evaluation Area 2**

PRE-DESIGN INVESTIGATION PHASE I DATA  
EVALUATION REPORT FOR THE LDW UPPER REACH

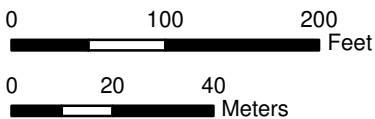
**DRAFT**



Prepared by craigh, 2/9/21; W:\Projects\Duwamish AOC\4\GIS\Maps and Analyses\Phase I Data Evaluation Report\Map I-4 7246 Contaminant Trends - A3-4-5.mxd



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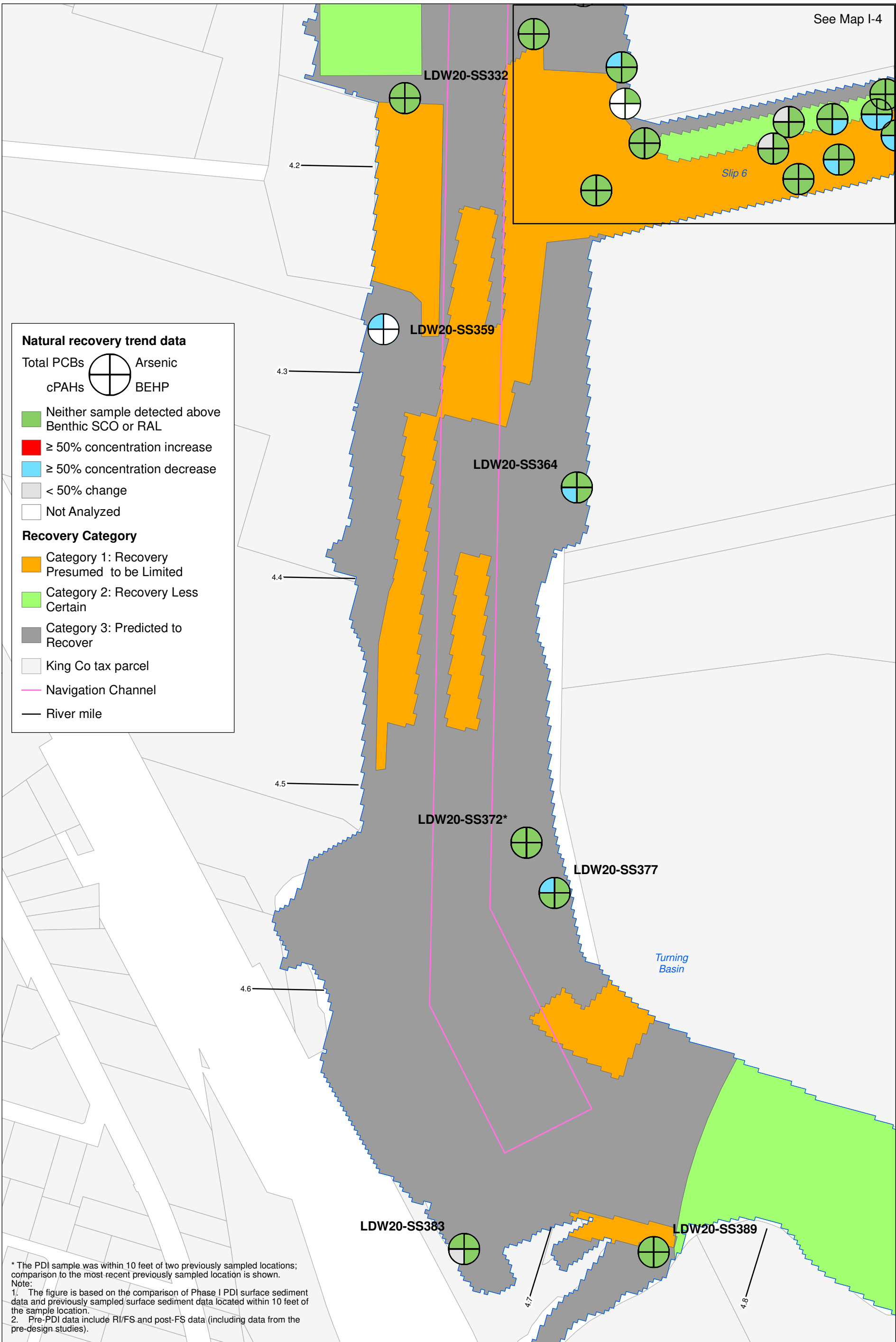
**Map I-4. Comparison between Phase I PDI data and pre-PDI data at re-occupied locations - Evaluation Areas 3, 4, and 5**

PRE-DESIGN INVESTIGATION PHASE I DATA  
EVALUATION REPORT FOR THE LDW UPPER REACH

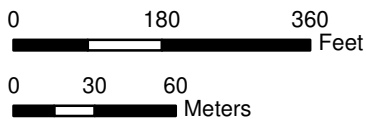
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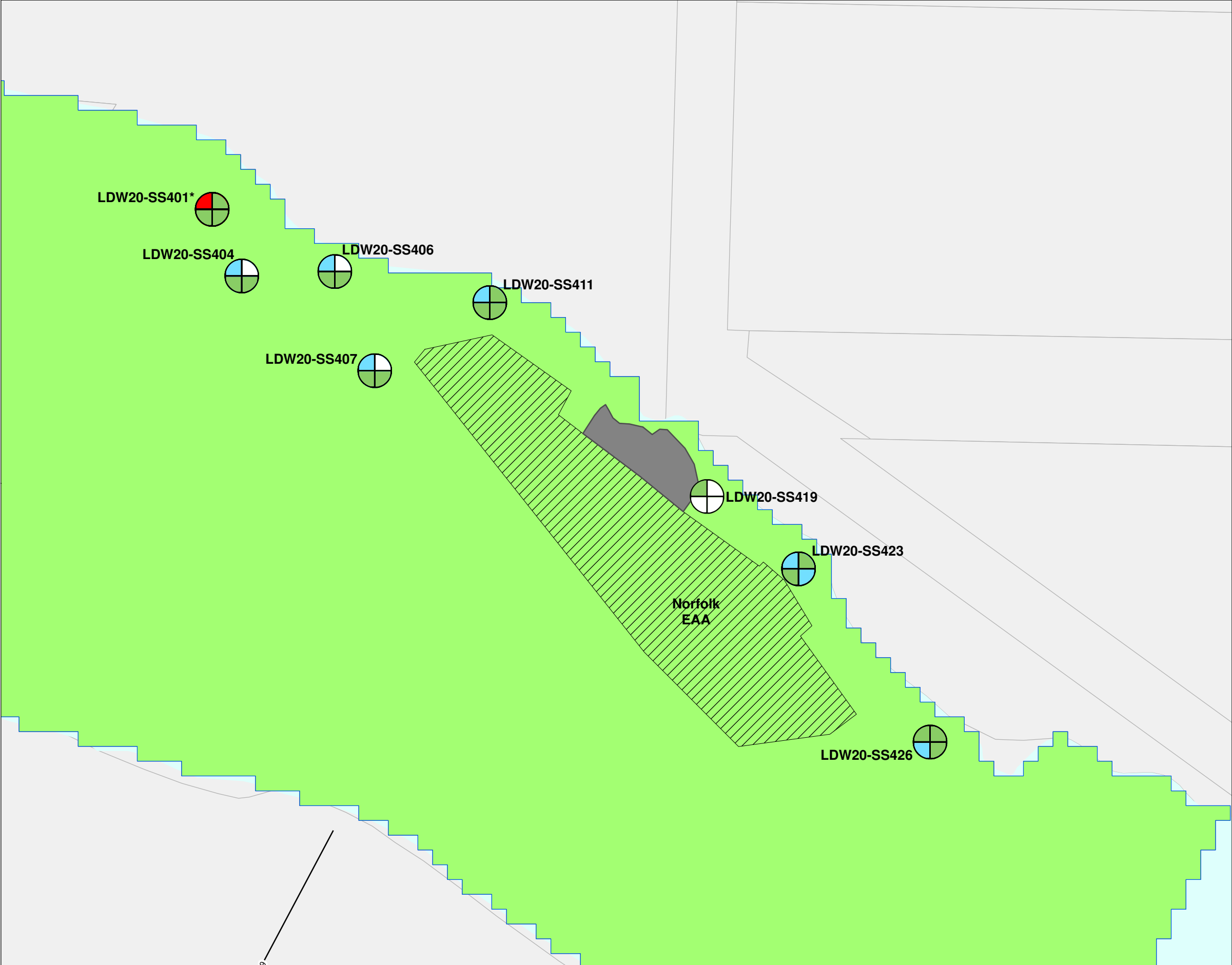


**Map I-5. Comparison between Phase I PDI data and pre-PDI data at re-occupied locations - Evaluation Area 6**

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EVALUATION REPORT FOR THE LDW UPPER REACH

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**Natural recovery trend data**

Total PCBs  
cPAHs

Arsenic  
BEHP

Neither sample detected above Benthic SCO or RAL

≥ 50% concentration increase

≥ 50% concentration decrease

< 50% change

Not

**Recovery Category**

Category 2: Recovery Less Certain

Boeing South Storm Drain

Early Action Area

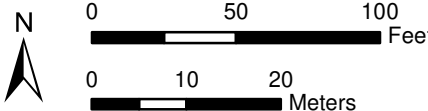
King Co tax parcel

River mile

\* The PDI sample was within 10 feet of two previously sampled locations; comparison to the most recent previously sampled location is shown.

Note:

1. The figure is based on the comparison of Phase I PDI surface sediment data and previously sampled surface sediment data located within 10 feet of the sample location.
2. Pre-PDI data include RI/FS and post-FS data (including data from the pre-design studies).



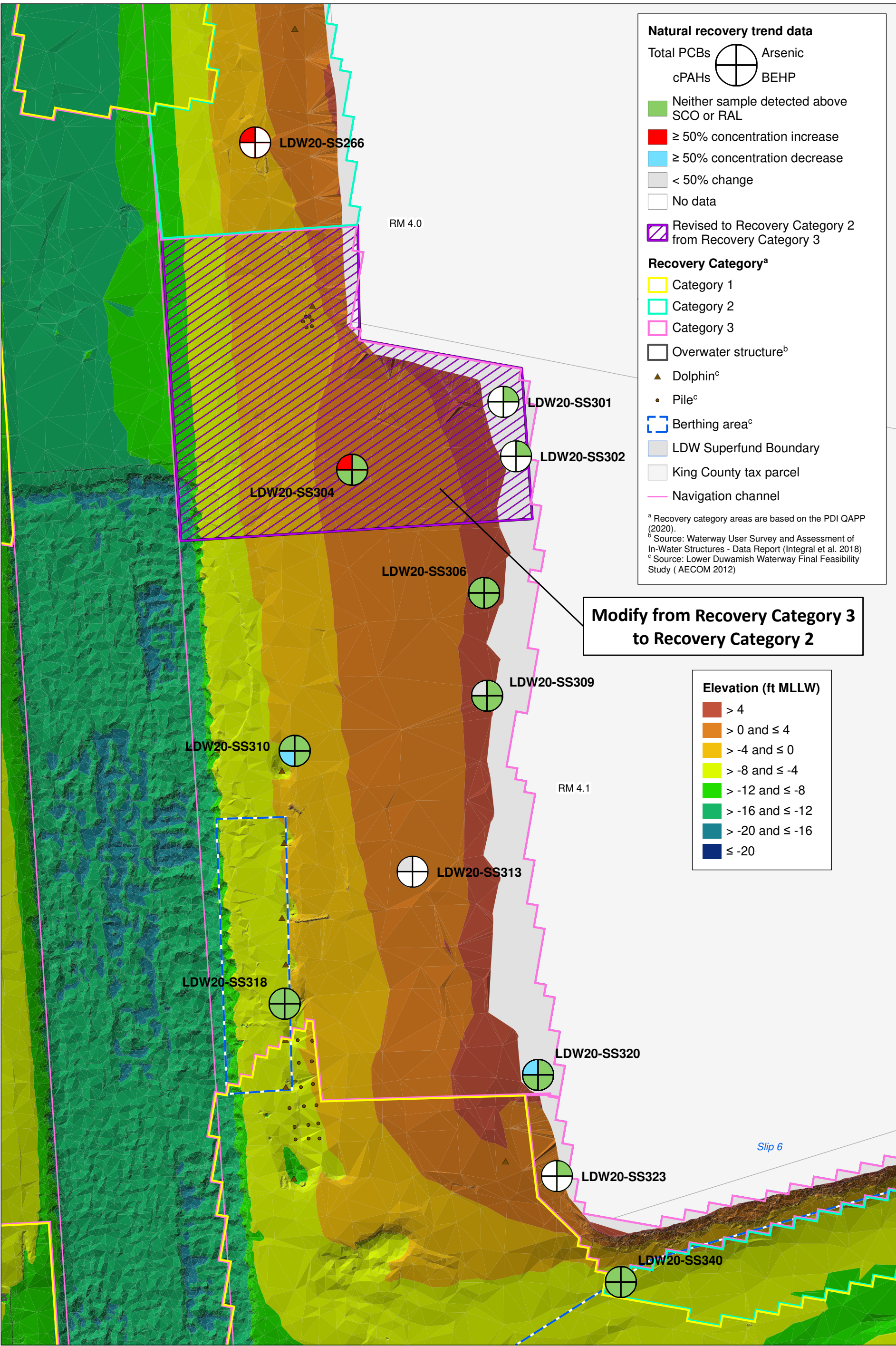
**Map I-6. Comparison between Phase I PDI data and pre-PDI data at re-occupied locations - Evaluation Area 7**

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**Natural recovery trend data**

Total PCBs  
cPAHs

Arsenic  
BEHP

Neither sample detected above  
SCO or RAL

≥ 50% concentration increase

≥ 50% concentration decrease

< 50% change

No data

Revised to Recovery Category 2  
from Recovery Category 3

**Recovery Category<sup>a</sup>**

Category 1

Category 2

Category 3

Overwater structure<sup>b</sup>

Dolphin<sup>c</sup>

Pile<sup>c</sup>

Berthing area<sup>c</sup>

LDW Superfund Boundary

King County tax parcel

Navigation channel

<sup>a</sup> Recovery category areas are based on the PDI QAPP (2020).

<sup>b</sup> Source: Waterway User Survey and Assessment of In-Water Structures - Data Report (Integral et al. 2018)

<sup>c</sup> Source: Lower Duwamish Waterway Final Feasibility Study (AECOM 2012)

**Modify from Recovery Category 3  
to Recovery Category 2**

**Elevation (ft MLLW)**

> 4

> 0 and ≤ 4

> -4 and ≤ 0

> -8 and ≤ -4

> -12 and ≤ -8

> -16 and ≤ -12

> -20 and ≤ -16

≤ -20

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0 50 100 Feet  
0 10 20 Meters

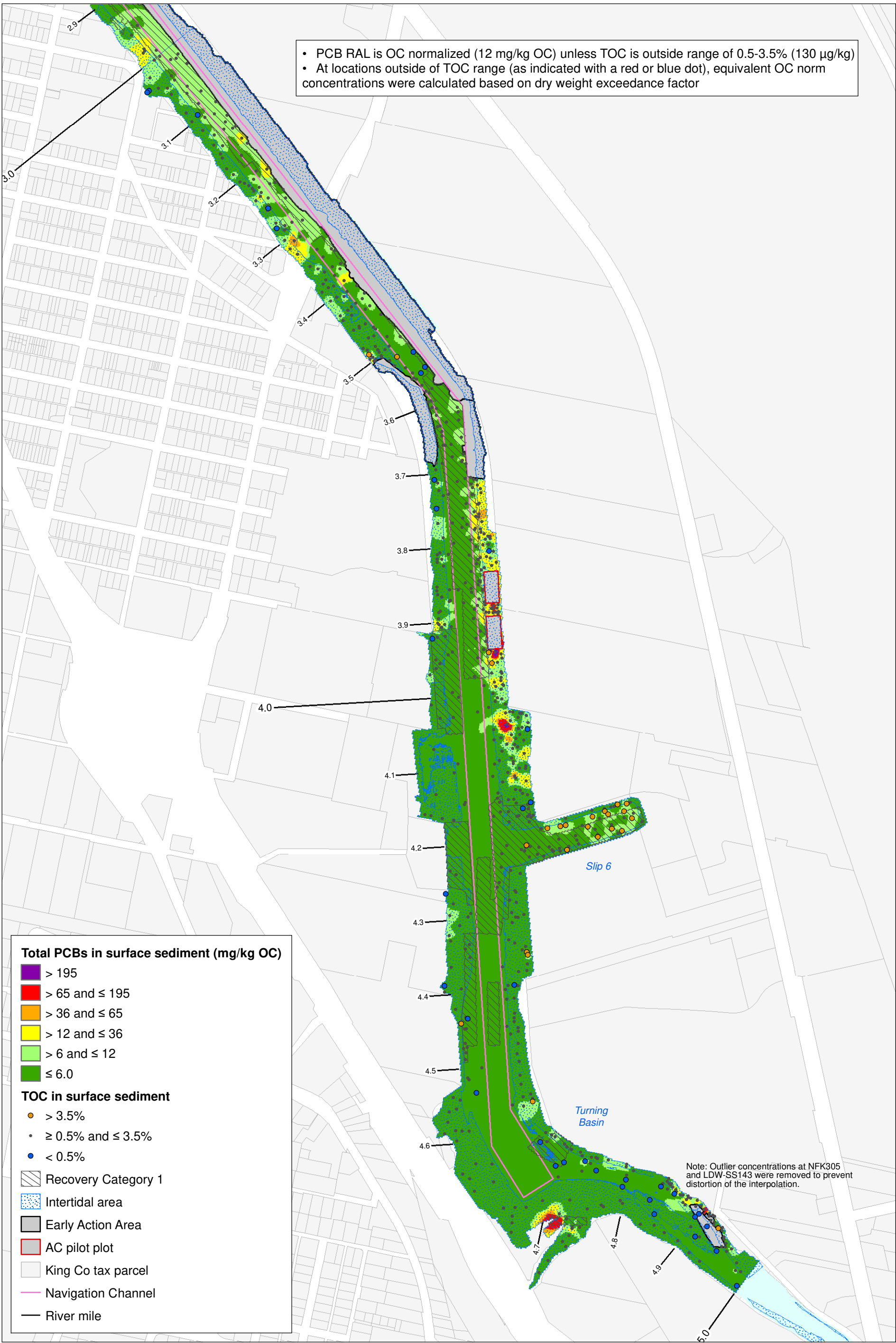
**Map I-7. Recommended recovery category  
modification**

PRE-DESIGN INVESTIGATION PHASE I DATA  
EVALUATION REPORT FOR THE LDW UPPER REACH

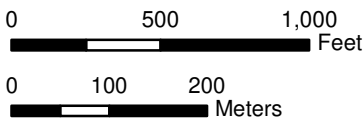
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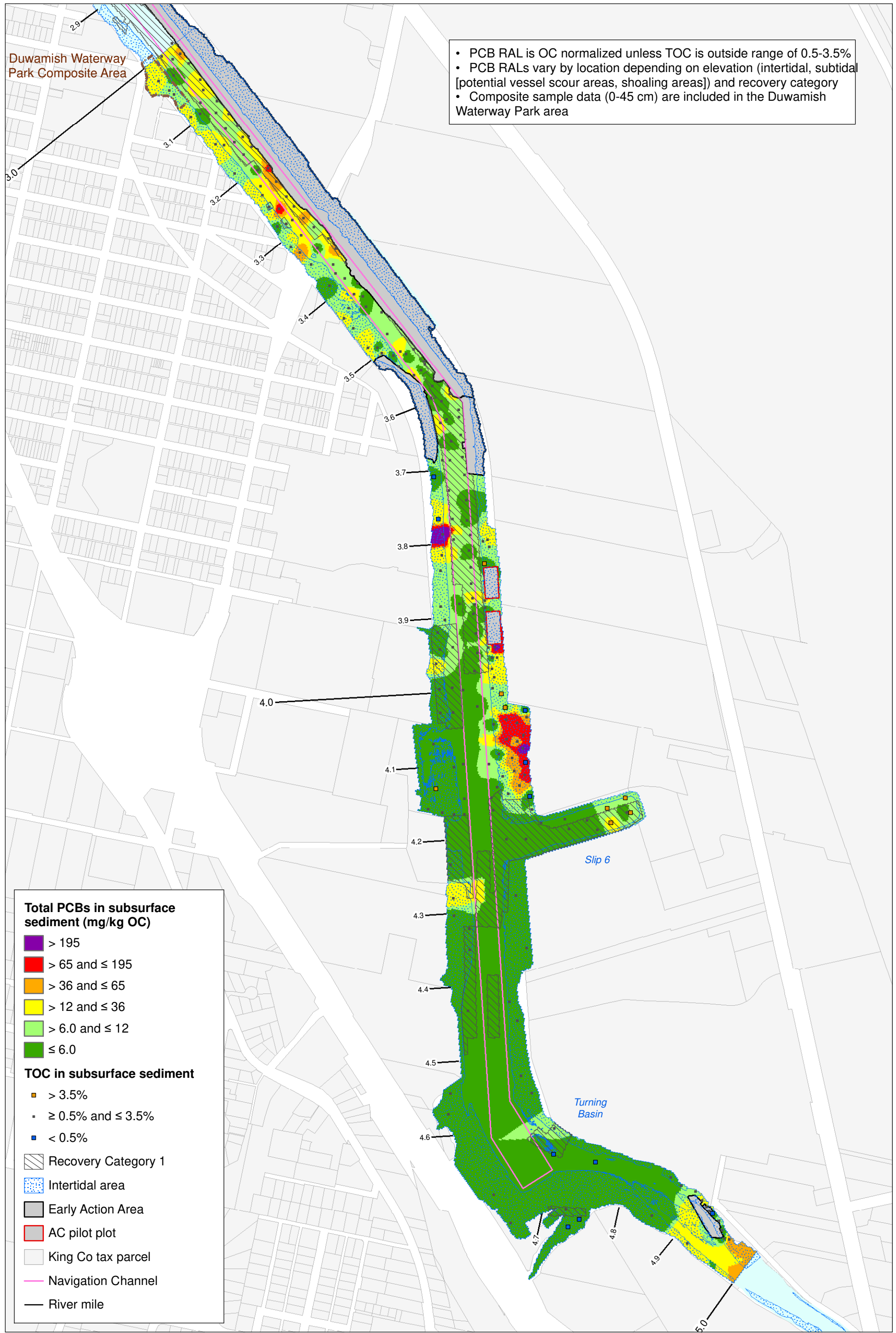


**Map J-1. IDW interpolation of total PCB concentrations (mg/kg OC) in surface sediment**

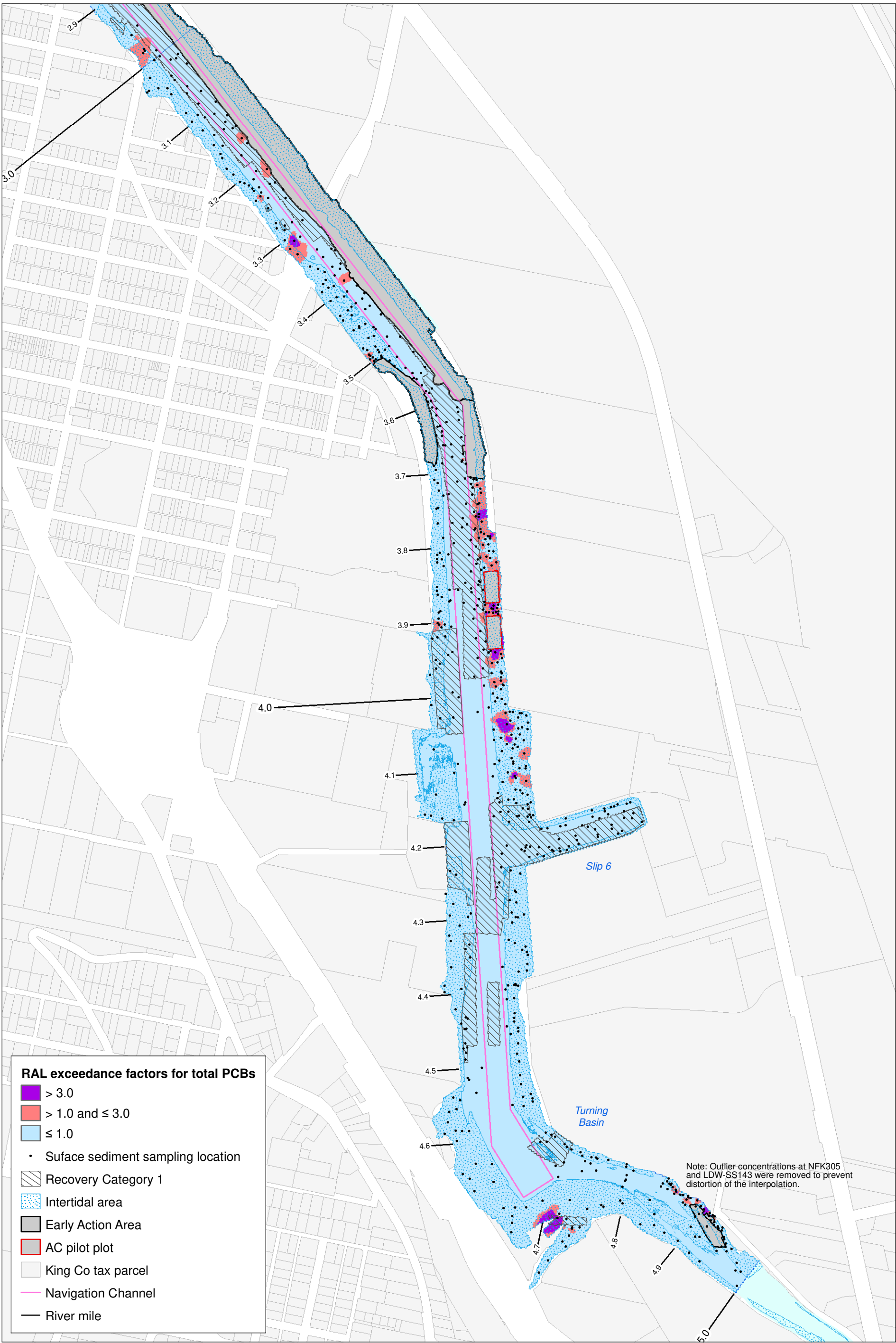
PRE-DESIGN INVESTIGATION PHASE I DATA EVALUATION REPORT FOR THE LDW UPPER REACH

**DRAFT**

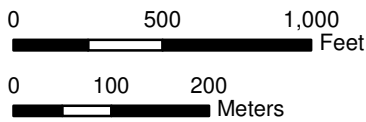




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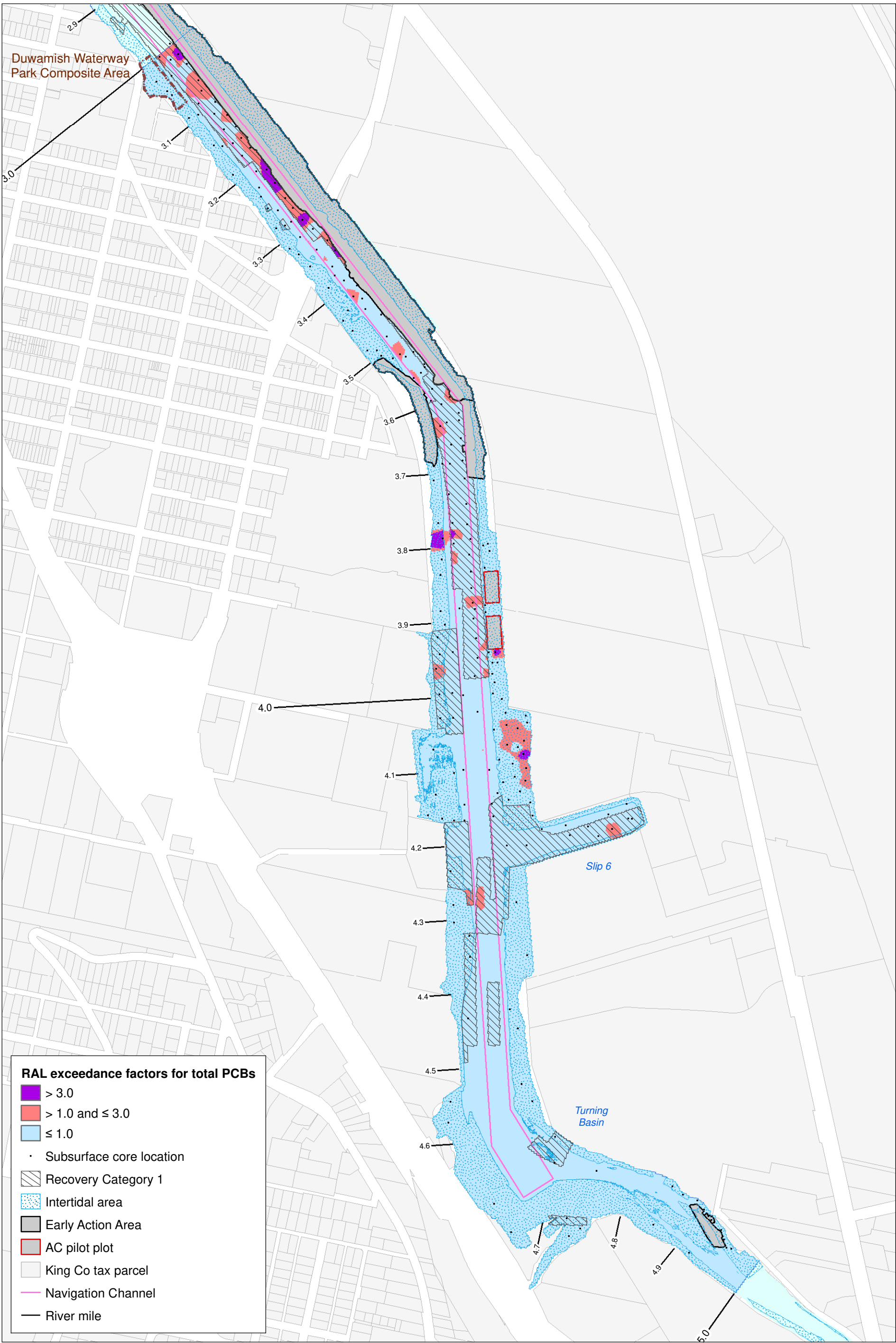


**Map J-3. PCB RAL exceedance areas in surface sediment based on the design dataset**

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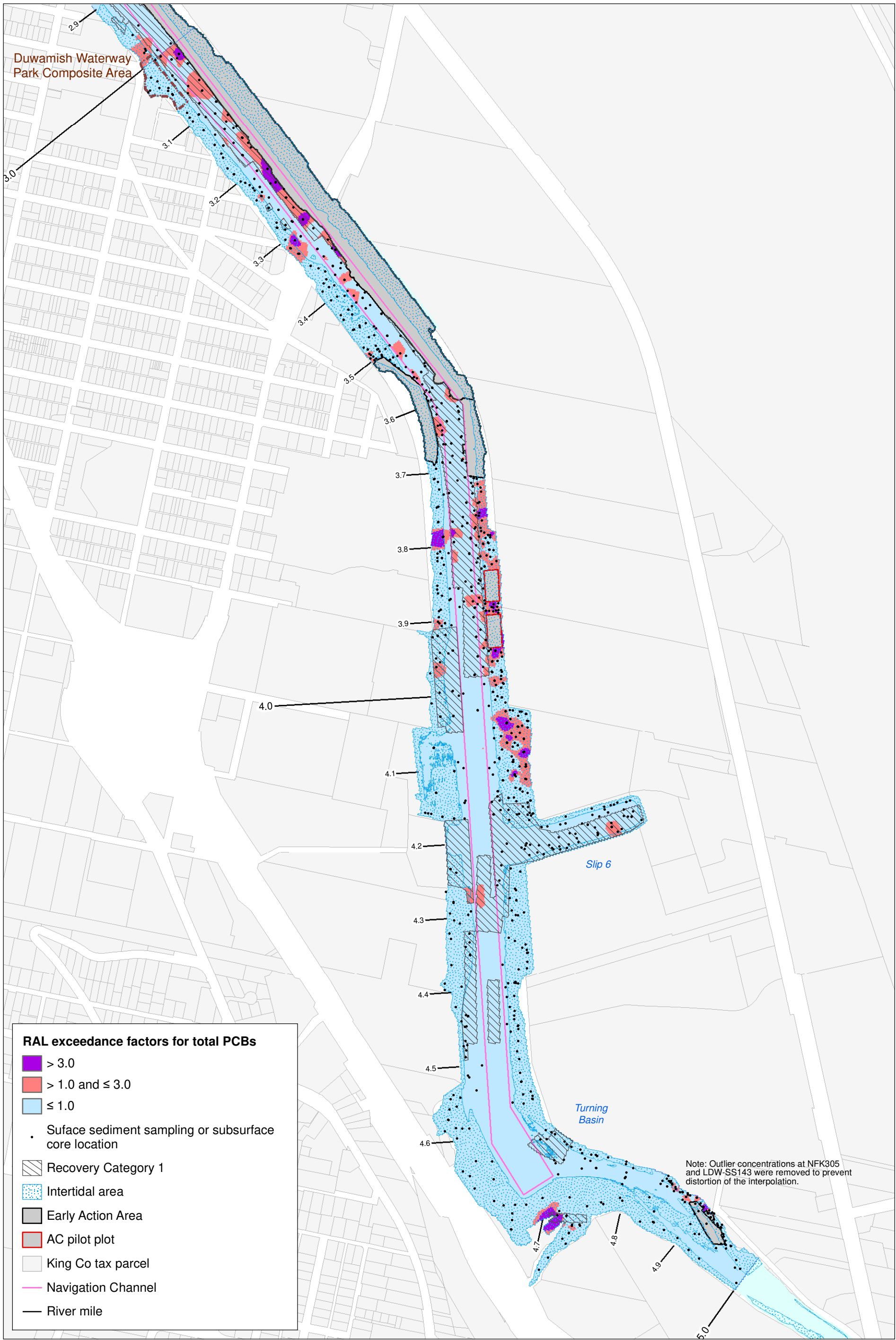
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0 500 1,000 Feet  
0 100 200 Meters

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0 500 1,000 Feet  
0 100 200 Meters

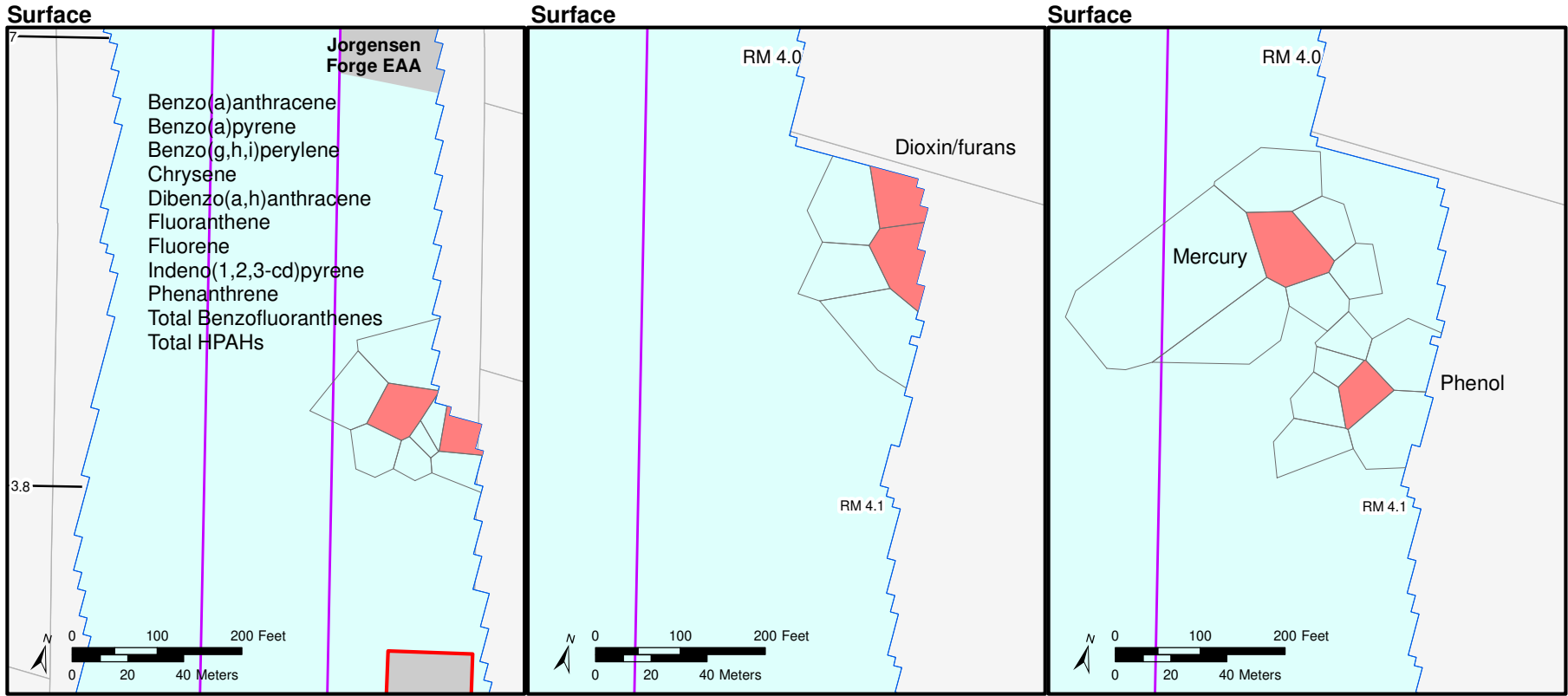
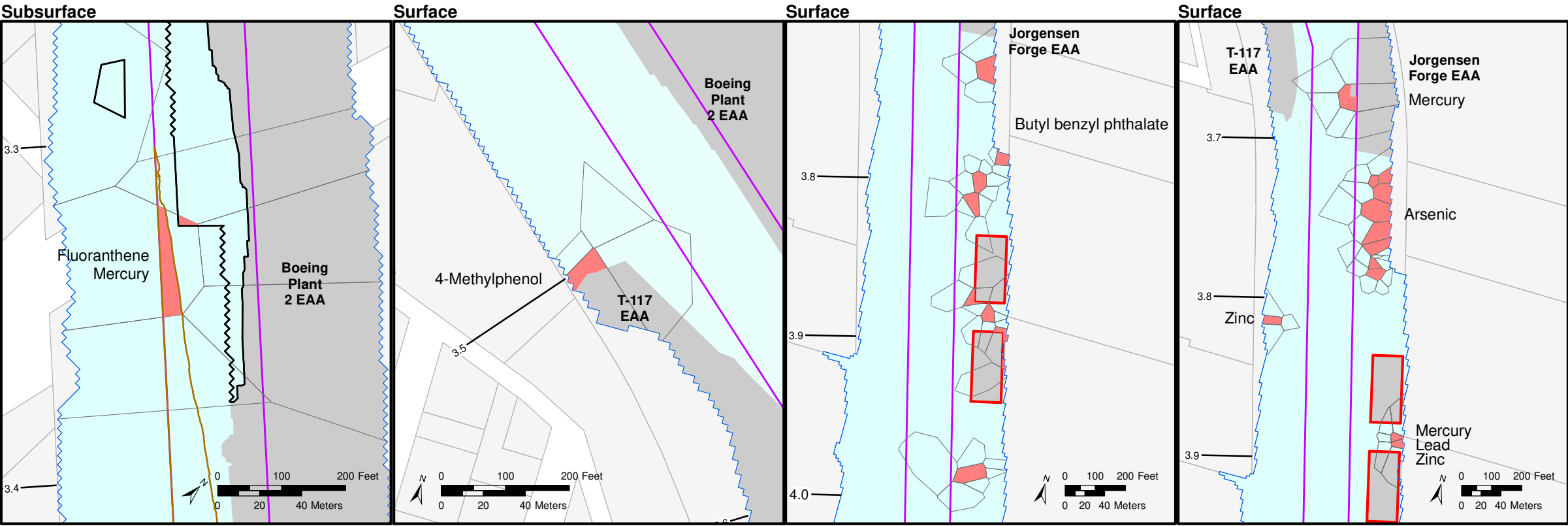
Map J-5. PCB RAL exceedance areas in  
surface and subsurface sediment combined  
based on the design dataset

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EVALUTATION REPORT FOR THE LDW UPPER REACH

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- Thiessen polygon with RAL exceedances
- Non-exceedance Thiessen polygon bounding the RAL exceedance polygons<sup>a</sup>
- Recovery Category 1
- Shoal area
- Early Action Area
- AC Pilot plot
- LDW Superfund Boundary
- King Co tax parcel
- Navigation Channel
- River mile

<sup>a</sup> Thiessen polygon shapes vary between chemicals and sampling depth. For clarity, bounding polygons are limited to those immediately surrounding the RAL exceedance polygons, and RAL exceedance polygons and bounding polygons that have the same pattern are grouped together.

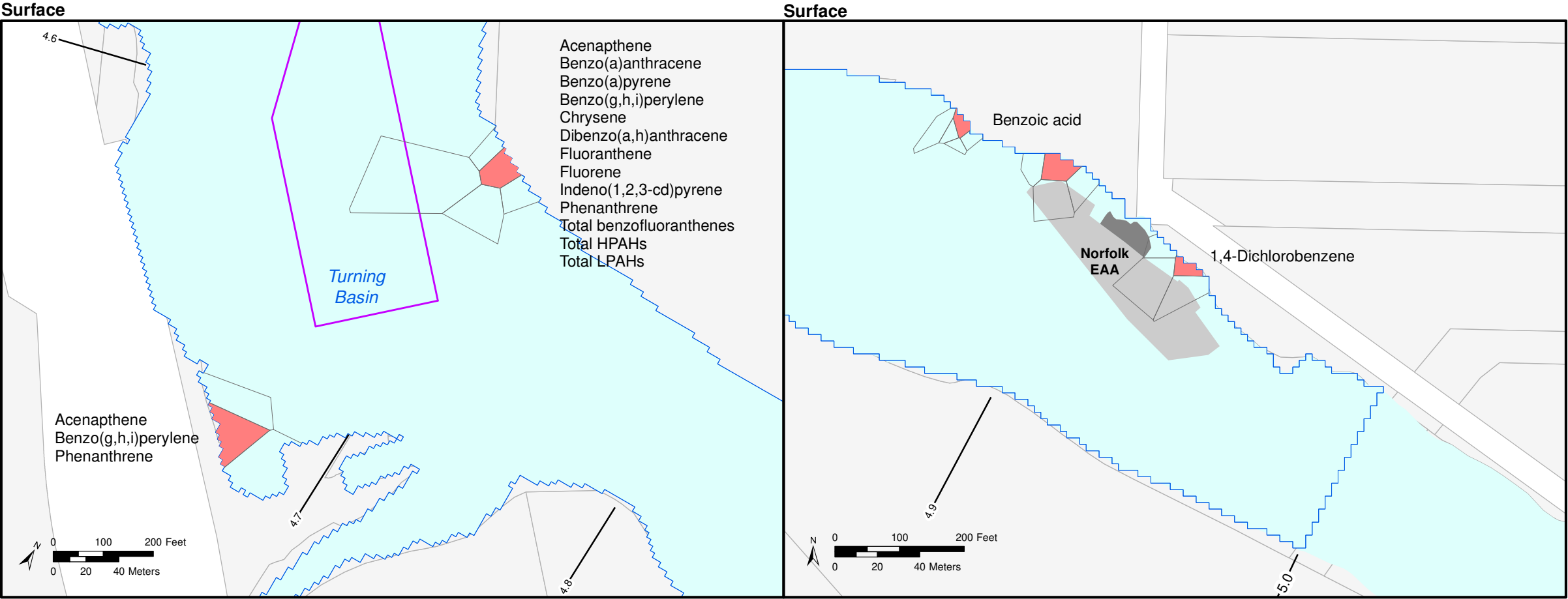
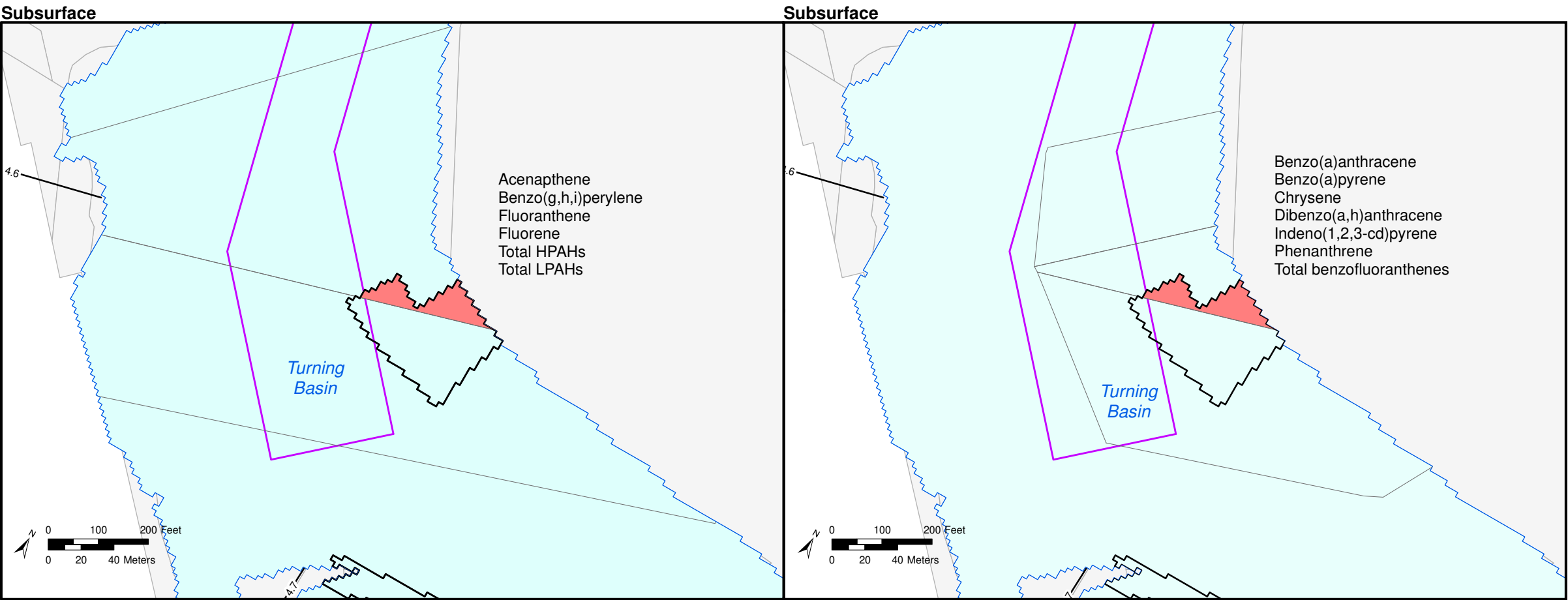
**Map J-6a. Thiessen polygons with RAL exceedances of COCs other than PCBs, RM 3.0 to RM 4.1**

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- Thiessen polygon with RAL exceedances
- Non-exceedance Thiessen polygon bounding the RAL exceedance polygons<sup>a</sup>
- Recovery Category 1
- Early Action Area
- Boeing South Storm Drain
- LDW Superfund Boundary
- King Co tax parcel
- Navigation Channel
- River mile

<sup>a</sup> Thiessen polygon shapes vary between chemicals and sampling depth. For clarity, bounding polygons are limited to those immediately surrounding the RAL exceedance polygons, and RAL exceedance polygons and bounding polygons that have the same pattern are grouped together.

**Map J-6b. Thiessen polygons with RAL exceedances of COCs other than PCBs, RM 4.1 to RM 5.0**

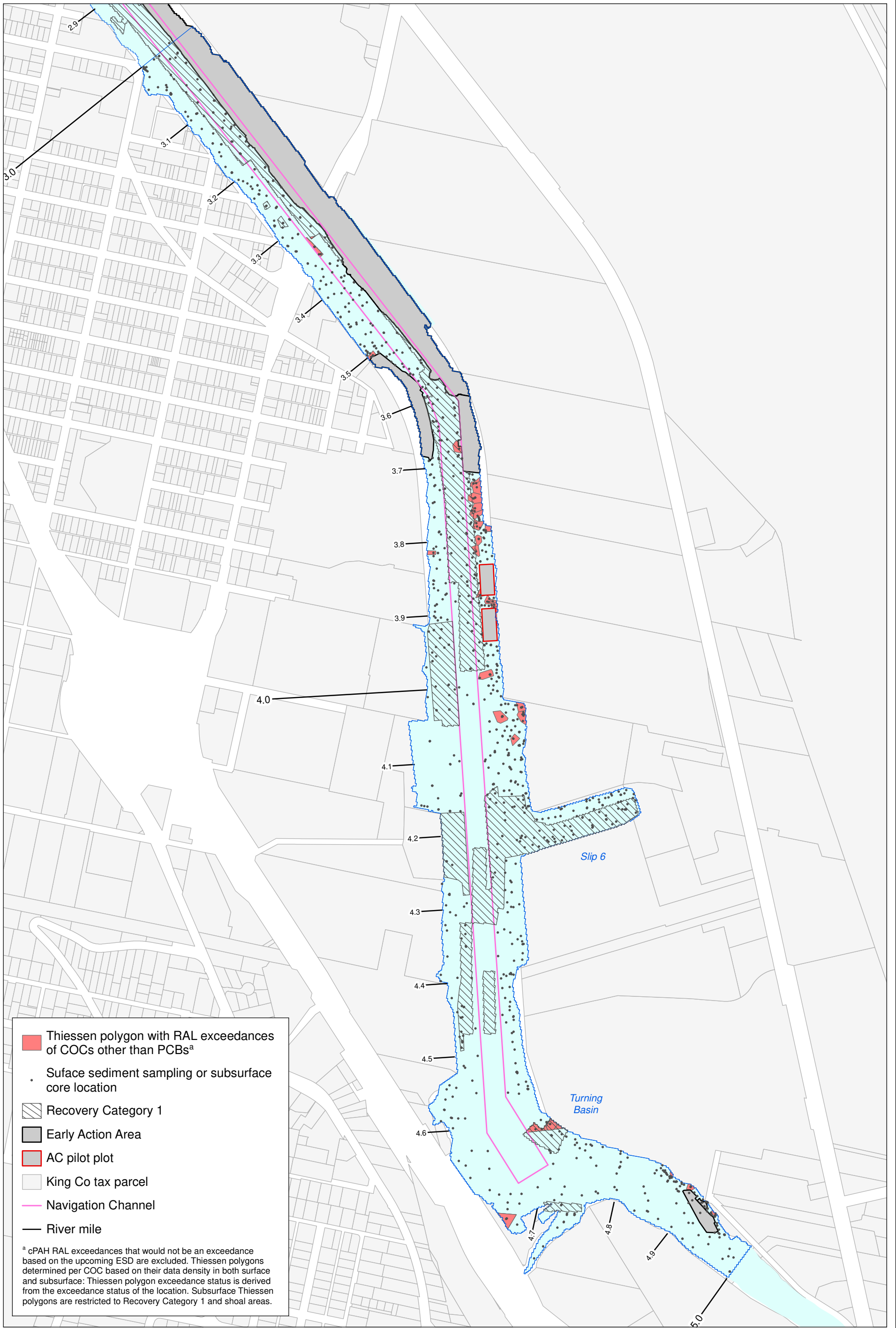
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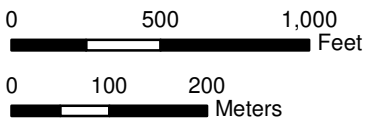
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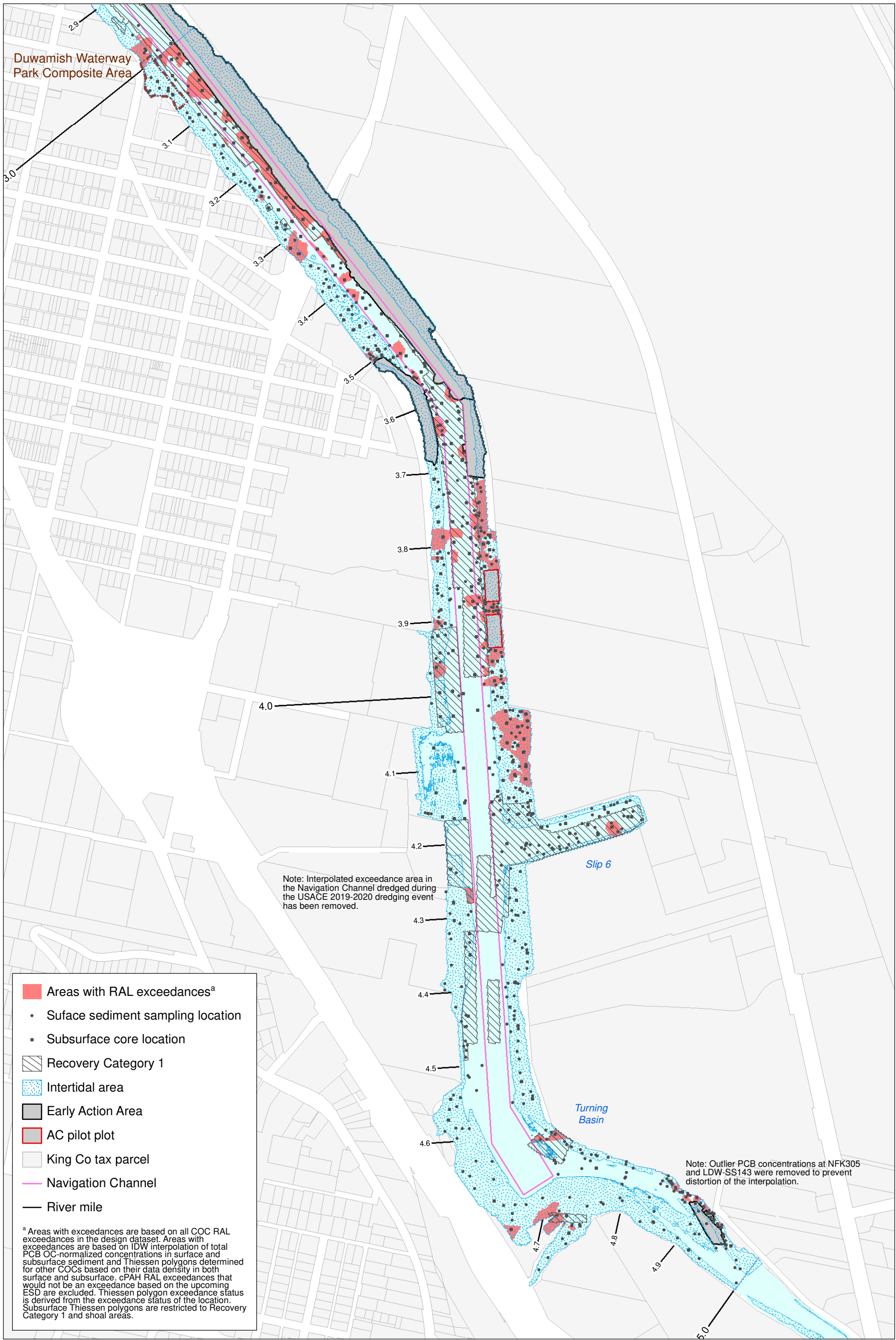


**Map J-7. RAL exceedance areas based on Thiessen Polygons combined for all COCs other than PCBs**

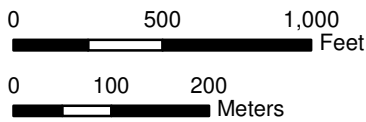
PRE-DESIGN INVESTIGATION PHASE I DATA  
EVALUTATION REPORT FOR THE LDW UPPER REACH

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**Map J-8. Areas with RAL exceedances based on the design dataset**

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